Exhibit A

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
WACO DIVISION

TEXAS BLOCKCHAIN COUNCIL, a nonprofit association; RIOT PLATFORMS, INC.,	)	
Plaintiffs	)	**Case No. 6:24-cv-99**
v.	)	
DEPARTMENT OF ENERGY; JENNIFER M. GRANHOLM, in her official capacity as Secretary of Energy; ENERGY INFORMATION ADMINISTRATION; JOSEPH DECAROLIS, in his official capacity as Administrator of Energy Information Administration; OFFICE OF MANAGEMENT AND BUDGET; SHALANDA YOUNG, in her official capacity as Director of Office of Management and Budget,	)	
Defendants.	)	

VERIFIED AFFIDAVIT OF DR. CYRUS REED

I, Cyrus Reed, make the following declaration based upon my personal knowledge and expertise.

I declare under penalty of perjury that the following is true and correct.

I. My Background and Experience Engaging With ERCOT

1. My name is Cyrus Reed. I am a resident of Austin, Texas. I have a Ph. D. in geography from the University of Texas at Austin.

2. For more than 16 years, I have worked for the Sierra Club, specifically for the Lone Star Chapter, which is the Texas chapter of the Sierra Club. While I have held several positions, my current position is Legislative and Conservation Director of the Lone Star Chapter.

3. As part of my work responsibilities, I am the main point of contact for the Sierra Club at the Texas legislature, Public Utility Commission of Texas (PUCT), the State Energy Conservation Office (SECO) and Electric Reliability Council of Texas (ERCOT).

4. In my role at Sierra Club, I regularly analyze potential threats to reliability and affordability for the electric grid. In recent years, the chapter has advocated for the important role that demand response and energy efficiency can play in supporting a reliable grid. Thus, I regularly attend the Demand Side Working Group at ERCOT, the Energy Efficiency Implementation Project meetings at the PUCT, frequently meet with private and public utilities about their load management and energy efficiency programs and was even responsible in 2022 for crafting a rulemaking petition designed to increase residential and commercial energy efficiency and demand response programs at the PUCT and ERCOT.

5. For roughly 10 years, I have regularly attended ERCOT meetings; analyzed ERCOT reports, including those related to ancillary services; participated in the Demand Side Working Group; considered reports related to demand response; participated in utility energy efficiency cost recovery fee proceedings; and worked with legislative offices on proposals to expand energy efficiency and demand response programs. For example, we supported a protocol revision request that allowed more responsive reserves to be supplied through demand response programs, and also advocated for the expansion of emergency reserve services that are open to weather-sensitive (mainly residential) demand response. Both proposals were adopted through the ERCOT process and approved by the PUCT.

6. ERCOT is the independent system operator for much of Texas or, in other words, the independent entity that operates much of the state's electric grid. It provides a competitive market for electricity. The Sierra Club is an official voting member of ERCOT, and I have served as a representative of the Sierra Club at ERCOT for over seven years. Specifically, I serve on the Reliability and Operations Subcommittee as the representative for small commercial electricity consumers.

7. As a representative for small commercial electricity consumers, I am aware especially of the need to balance the reliability of the grid with the costs to consumers, and also work to assure that all technologies, including demand response, distributed generation, batteries, renewable resources and fossil-fuel generation can compete to provide reliability and ancillary services.

8. I have voting privileges as well on the Protocol Revision Subcommittee. The Protocol Revision Subcommittee (PRS), which is accountable to the Technical Advisory Committee (TAC), is responsible for reviewing and recommending action on formally submitted Nodal Protocol Revision Requests (NPRRs) and System Change Requests (SCRs).

II. ERCOT Market Structure

9. In ERCOT, the wholesale cost of electricity is determined through an approved competitive bid process and is not under the direct control of the PUCT.Under the wholesale bid process, electricity market prices fluctuate as a function of both commodity prices (i.e. gas and coal prices) and demand. The cheapest generators that bid into the market are brought online first, followed by increasingly expensive to operate generators. In economic terms, the sequence of which generators are brought online describes a supply curve, from the least expensive to the most expensive marginal supply options. The demand at any given moment intersects that supply

curve at the settlement price, or the wholesale cost of electricity. When demand is lower, the wholesale cost of electricity is lower. When demand increases, the cost of energy increases. As additional customers demand service, the wholesale price of electricity, and the cost of serving all customers, rises. This is, in effect, the outcome of pushing up higher (or to the right) on the supply curve. Cryptocurrency mining operations are a substantial new demand, and therefore create higher wholesale costs.

10. The wholesale cost of electricity impacts consumers, including residential consumers. Most residential consumers are on a fixed price contract, meaning they pay a certain amount per kilowatt. While this fixed price structure protects them initially from scarcity pricing events, even those on a fixed price contract will eventually pay for increased electricity costs. This is true because retail electric providers, municipally-owned utilities and electric cooperatives are likely to raise rates or increase the price of contracts in the future, or because the existing contract includes "extra" fees or costs. As an example, for Austin Energy customers in the Austin area, bills include a Power Supply Adjustment (PSA). This additional fee is a dollar-for-dollar recovery that includes the cost of fuel for Austin Energy's power plants, the cost of electricity purchased from the grid, and any net change experienced as Austin Energy sells power to the grid.[1]

11. Electricity prices in ERCOT are particularly vulnerable to volatility because roughly half of all electricity in ERCOT is provided by gas. As a result, the price of gas is a major factor in ERCOT wholesale and, ultimately, retail electricity prices.[2]

[1] In 2022, the City Council chose to spread the cost of a proposed PSA increase over three years, but did allow Austin Energy to adjust the PSA on a monthly basis as needed. https://austinenergy.com/about/news/news-releases/2022/city-council-adopts-austin-energy-pass-through-rates-effective-nov-1.

[2] Mark Watson, "Harsh Weather, costly natural gas boost Texas Power Prices," S & P Global Commodity Inisghts, January 10, 2023, *available at* https://www.spglobal.com/commodityinsights/en/market-

III. Winter Storm Uri

12. Recent events like ERCOT's severe failures during Winter Storm Uri in February 2021 have revealed how quickly prices in times of high demand and more limited electricity, especially more limited gas supply, can quickly rise for consumers.

13. Winter Storm Uri was a major event that severely impacted the ERCOT grid, leading to major blackouts throughout Texas and ultimately to hundreds of deaths. A severe winter storm and accompanying cold weather caused both power plant failures and increased demand, as Texas residents needed heat. As a result, ERCOT's supply and demand system failed: demand greatly exceeded supply, leading to severe electricity shortages and causing the ERCOT grid to teeter on the brink of full collapse.

14. During Winter Storm Uri, the Texas power grid's failures meant that millions of Texans were without power for several days. Hundreds of Texans died due to lack of power during the severe weather, including from freezing to death in their own homes and carbon monoxide poisoning in desperate attempts to get warm. While the "official" death toll is above 200 deaths, other independent analysis has concluded that close to 1,000 Texans died either directly or from complications resulting from the storm, including from loss of power.

15. Also during Winter Storm Uri, wholesale electricity prices increased hugely. With electricity scarce, the PUCT allowed the market pricing to go to the System Wide Offer Cap, which at the time was $9,000 per megawatt-hour (MWh). A decision to keep the cap at $9,000 for multiple hours led to billions of dollars of impact to the system. As a result, many retail electric providers, municipally-owned utilities and electric cooperatives, as well as some generators which had promised to provide energy and could not were left with huge bills owed to

insights/latest-news/natural-gas/011023-us-power-tracker-harsh-weather-costly-natural-gas-boost-texas-power-prices.

the market, while other entities actually earned revenues. Natural gas prices also rose dramatically, impacting consumers large and small, while some gas suppliers literally made hundreds of millions of dollars. After Uri, many of the electric and natural gas costs were securitized through legislative action, meaning that some Texas consumers will be paying these costs for decades.[3]

16. Under adverse conditions, such as Winter Storm Uri, wholesale market prices can increase dramatically, up to several hundred times the normal cost of electricity. These cost spikes impact customers and utilities alike. After Winter Storm Uri, for example, Brazos Electric Cooperative, one of the largest rural electric providers in Texas, was forced into bankruptcy after it faced massive charges for wholesale energy costs. Because Brazos Electric Cooperative is the wholesale provider to 16 member cooperatives, the impact to ratepayers is still being worked out through the courts. The largest electric cooperative — Pedernales Electric Cooperative — is charging consumers a temporary Winter Storm Uri surcharge to pay off its approximately $160 million of storm-related debt. For the average PEC residential member, the surcharge amounts to an increase of approximately $8.75 per month, based on an average 1,250 kilowatt hour of use. This amount appeared as a line item on members' monthly bills during the 24 month period beginning October 1, 2021. Since everyone's monthly electricity use is different, the surcharge will vary from member to member. Similarly, numerous residential and small businesses faced extraordinarily high operating costs from record-high wholesale electricity costs.[4]

[3] Sierra Club, The Failure of Fossil Fuels: Learning from Winter Storm Uri, February 2022. Available at https://www.sierraclub.org/sites/default/files/The%20Failure%20of%20Fossil%20Fuels%20-%20Winter%20Storm%20Uri%20Report%20-%20Feb%202022.pdf.

[4] Sierra Club, The Failure of Fossil Fuels: Learning from Winter Storm Uri, February 2022 at 11. Available at https://www.sierraclub.org/sites/default/files/The%20Failure%20of%20Fossil%20Fuels%20-%20Winter%20Storm%20Uri%20Report%20-%20Feb%202022.pdf.

IV. Increased Demand and Increased Prices in ERCOT

17. Electric peak demand in ERCOT has risen over the last several years. The peak demand for electricity on the ERCOT grid was almost 12 gigawatts (or 12,000 megawatts) higher in 2023 than it was in 2021. It had previously taken 15 years for demand to grow by 12 GW. In other words, electrical usage on the hottest day of the summer in Texas grew by as much from 2021 to 2023 as it did from 2005 to 2021.[5]

18. Between 2018 and 2022, the state's population grew by 5%, and in ERCOT, peak load grew by 9%. In the hot summer of 2023, ERCOT set a series of new records, including a new peak demand record of 85,435 MW on August 10, 2023. This peak demand was roughly 5,000 MW higher, or about 7% more, than the record just a year before. Similarly, December 23, 2022 set a new winter peak demand record of 74,525 MW. On January 16, 2024, during Winter Storm Heather, a new winter peak was set of 78,138 MW.[6]

19. The pace of load growth in ERCOT has dramatically accelerated over the past few years. In 2023, the peak demand was 85,508 MW. Only two years earlier, in 2021, peak demand was 73,687 MW. Prior to 2021, it had taken 15 years for peak demand to increase by 12,000 MW–from a peak of 60,274 MW in 2005.[7]

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[5] As an example, the peak August demand record in 2023 was set on August 10th, 2023 when some 85,508 MWs were used, topping the previous record of 78,505 MWs on August 2nd, 2022, while the maximum September 2023 peak use was 84,343 MWs, more than 12,000 MWs higher than the previous high set in September of 2021 (72,370 MWs set 09/01/2021). Information on peak demand records can be found here: https://www.ercot.com/static-assets/data/news/Content/a-peak-demand/2023/all-time-records.htm.

[6] ERCOT, Monthly Report Issued 2024, https://www.ercot.com/files/docs/2024/01/31/ERCOT-Monthly-January-2024.pdf

[7] ERCOT, Yearly Peak Demand, available at https://www.ercot.com/static-assets/data/news/Content/a-peak-demand/records-yearly-archive.htm.

20. On September 6, 2023, ERCOT declared an emergency event because reserves fell below 1,750 MW. Among other resources, ERCOT deployed non-controllable load resources (NCLRs) providing Responsive Reserve Service and ERCOT Contingency Reserve Service.[8]

21. As expected, ERCOT costs increase during periods of high demand. Costs are much higher during these times. As an example, according to data provided by ERCOT in a recent ERCOT monthly report, both real-time and day-ahead settlement prices in August 2023 that were much higher than a year before. As an example, average wholesale day-ahead prices in August 2023 were above $300 per MWh, while in August 2022 when demand was much lower, prices averaged less than half—about $100 per MWh. While the differences between August 2022 and August 2023 were less pronounced, real time prices in August 2023 were over $200 per MWh, while real time prices in August 2022 averaged about $90 per MWh.[9]

22. Similarly, ERCOT procured more than $80 million in August of 2023 as peak demands grew during that month. Just a few months later when demand was much lower, ancillary services cost less than $17 million, again showing how high demand periods lead to higher costs to ERCOT consumers.[10]

23. Prices on individual days were even more pronounced. On September 6, 2023, when ERCOT issued an emergency alert, real-time power prices briefly hovered around the (now) $5,000 maximum price in most of ERCOT's Texas hubs. This is in stark contrast to

[8] ERCOT, 2023 Annual Demand Response Report, January 2024, at 6, https://www.ercot.com/mp/data-products/data-product-details?id=NP3-110.
[9] ERCOT, ERCOT Monthly Operational Overview (August 2023) Revised 11.17.23, https://www.ercot.com/files/docs/2023/11/17/REVISED-ERCOT-Monthly-Operational-Overview-August-2023.pdf; ERCOT, ERCOT Monthly Operational Overview (August 2022), https://www.ercot.com/files/docs/2022/09/19/ERCOT%20Monthly%20Operational%20Overview%20August%202022.pdf.
[10] ERCOT Monthly, Issued January 2024,https://www.ercot.com/files/docs/2024/01/31/ERCOT-Monthly-January-2024.pdf.

average wholesale real-time prices in September of 2023, which averaged slightly more than $100 dollars over the month.[11]

24. Frequent peak demands in recent years indicate the potential for continued high prices and reliability concerns.

25. ERCOT has determined that 2,523 MW of large flexible load (a category that includes cryptocurrency facilities) operated in ERCOT in 2022, and that that figure rose to 4,479 MW total–an addition of 1,956 MW–in 2023.[12] Further, ERCOT projects the addition of 13,935 MW more of large flexible load by the end of 2024 and that the ERCOT grid by the end of 2027 will have a total 39,271 MW of large flexible load.[13]

26. Through my work and engagement with ERCOT, I am aware of the concerns that cryptocurrency facilities raise for ERCOT planning. In August 2023, ERCOT identified large loads (again, a category including cryptocurrency facilities) as a "[r]eliability risk," stating, "Large Loads have exhibited inconsistent behavior during Resource scarcity events."[14] ERCOT explained, "If ERCOT plans for expected Large Load response and the Load does not respond, it could drive the system into emergency conditions. If ERCOT plans for no response, it will increase consumer costs unnecessarily when the Load does respond."[15]

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[11] ERCOT Monthly, Issued January 2024, https://www.ercot.com/files/docs/2024/01/31/ERCOT-Monthly-January-2024.pdf

[12] ERCOT presentation, Large Load Interconnection Status (January 25, 2024) at 3, https://www.ercot.com/files/docs/2024/02/06/LLI-Queue-Status-Update-2024-1-25.pdf.

[13] ERCOT presentation, Large Load Interconnection Status (January 25, 2024), https://www.ercot.com/files/docs/2024/02/06/LLI-Queue-Status-Update-2024-1-25.pdf.

[14] ERCOT, NPRR1191 and Related Revision Requests Workshop, Overview of Large Load Revision Requests for 8.16.23 Workshop (August 16, 2023) at 10, *available at* https://www.ercot.com/calendar/08162023-NPRR1191-and-Related-Revision. This presentation is attached to my declaration as an exhibit.

[15] *Id.*

27. At the same time, ERCOT further explained that load forecasting issues for such large loads pose a reliability risk, stating, "ERCOT cannot readily identify larger load facilities and has limited visibility into their sensitivity to price and other forecasts."[16] ERCOT explained, "ERCOT is seeing greater load forecast error on extreme or unusual operating days when an accurate forecast is most critical."[17] ERCOT specifically noted, "ERCOT has limited visibility into the location and consumption of all larger loads. . . . Increased visibility into industrial load consumption would have also been useful during both Winter Storm Uri and Elliot, when larger Load usage was a critical forecasting input."[18]

28. Further, ERCOT stated in August 2023 that "[l]arge Load behavior can magnify the severity of grid events, increasing the negative impact to reliability."[19] ERCOT observed, "ERCOT has experienced multiple events in the last year where a significant amount of Large Load unexpectedly disconnected from the grid."[20]

29. In August 2023, ERCOT further identified large loads' rapid changes in consumption as a grid "reliability risk."[21] ERCOT explained, "Large Loads can change their MW consumption rapidly enough to exhaust available Regulation service. . . . ERCOT eventually will need to buy what may become an infeasible quantity of Regulation service to maintain frequency stability. This could add significant costs to ratepayers."[22]

30. Simply put, in a state with a peak demand of roughly 80,000 MWs in our main grid in 2022, large flexible load–including bitcoin and cryptocurrency mining–is reported to have

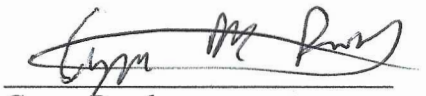
[16] *Id.* at 7.
[17] *Id.*
[18] *Id.*
[19] *Id.* at 8.
[20] *Id.*
[21] *Id.* at 9.
[22] *Id.*

a peak demand of approximately 2,400 megawatts, or about 3% of the entire state's peak demand. This was a lot in 2022, and it nearly doubled in 2023. ERCOT estimates that it could more than quadruple in 2024.

31. In light of this projected growth and the attendant risks, and in light of the Texas grid's ongoing reliability issues, greater information about cryptocurrency and bitcoin operations is clearly urgently necessary to reduce affordability and reliability risks to consumers–or, in other words, to keep the lights on and ensure electricity prices are affordable for Texans.

I declare, pursuant to 28 U.S.C. § 1746, under penalty of perjury that the foregoing is true and correct.

Executed in Austin, Texas, on February 27, 2024.



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